

First Annual Report on MissouriFamilies

December 2002, <http://missourifamilies.org/about/firstreport/index.htm>

Summary

In 2001, extension faculty in the College of Human Environmental Sciences at the University of Missouri-Columbia and regional faculty across Missouri developed a website for the general public that provides information about nutrition, health, family finances, housing, and human development. During the first year, the website grew to about 50,000 accesses per month by over 15,000 unique visitors. The site features information from over 1,200 answers to frequently asked questions and a variety of interactive learning opportunities. Based on search engine referrals, numerous pages are popular among Internet users. By analyzing how users navigate the site, there is early evidence that the site design, which provides a path from quick solutions to more in-depth information, is modestly successful. The challenge in the further development of this work is to provide more interactive learning opportunities (e.g., quizzes, surveys, discussions) and to continue integrating the content to more effectively provide learning paths that guide a visitor from one topic to additional more comprehensive information.

Website Development

The first task was to develop an attractive graphical design that was easy to navigate on the web, a technical infrastructure that was robust, scalable and easy to update, and an educational model that was appropriate for web-based delivery. All of these tasks were completed by November 2001 and the website <http://missourifamilies.org> was live.

To accomplish the educational mission of this website, we began by creating short answers to frequently asked questions and writing short articles on common topics. Over the year, faculty have written over 1,200 short answers and over 200 articles. In addition to the website, a brief weekly e-newsletter was developed that began publication in January 2002.

Progress

Accesses and visitors. The web provides a means of recording the activity on websites by monitoring the extent to which users access a page of material. Using this as a basis for documenting the use of this work, we can report the following information: Between November 1, 2001 – October 31, 2002, there were over 250,000 accesses to the website by over 60,000 unique visitors. Also, during the year we gained over 1,100 subscribers to the e-newsletter. The number of accesses and visitors to the website has grown steadily over the year. In October 2002, the website was accessed once every minute. There is a new visitor once every three minutes. On average, each short answer is accessed every two days and each article is accessed twice per day.

Search engine results. Search engines have become the most important way in which people find information on the Web. This is evident in our work as well. Of the top five websites that referred people to MissouriFamilies, all but one was a search engine. Search engines have different methods of determining which websites to list first, but at least one of the major criteria is the number of people who access a page. Thus, a rough indicator of the value of a webpage or website can be determined by the rank of the page on a list of pages at a search engine. During this first year, six keywords that are used by people to search for information have risen to the top of the listings by the major search engines. These are: Teenage obesity, Metab-o-lite, Modified food starch, Divorce rate united states, Cost of raising a child, Difference between Medicare and Medicaid.

For example, when searching the most popular search engines for the "united states divorce rate," the MissouriFamilies webpage on this topic was ranked in the following way:

Altavista	3 out of 30,813 pages
AOL	1 out of 144,000 pages

Yahoo	1 out of 180,000 pages
MSN	1 out of 83,931 pages
Google	1 out of 196,000 pages
Lycos	5 out of 467,849 pages

In short, this means that in the course of a year, this one page on MissouriFamilies has risen to the top of all the pages on the Internet on this keyword search. This provides evidence that this page is providing information that is valued by people searching on this topic.

Keywords. Keywords are used at search engines to find webpages that match user's interest. It is helpful to know what keyword topics result in users coming to a website. These keywords provide clues about what type of information is being sought. It could be thought of as a source of information about the concerns of web users. Here is a list of the top ten keywords used by people to come to MissouriFamilies.

Rank	Keywords
1	Metab-olite, metabolife, metab o lite, metab-o-lite plus
2	United states divorce rate, divorce rate, current divorce rate, divorce rate in the US
3	Teenage obesity
4	Bladder capacity
5	Modified food starch
6	Dehydration in the elderly
7	Navaring
8	Violent video games
9	Overweight children
10	Quick divorce

Most popular pages. The most popular pages provide some clues about what aspects of this work has been most sought by the public. Here is the list of pages by topic and web address:

Rank	Topic	Web address	Number of Accesses
1	Health risks of Metabolite	http://Missourifamilies.org/features/nutritionarticles/nut10.htm	9,676
2	Divorce rate	http://Missourifamilies.org/quick/divorceqa/divorceqa3.htm	3,878
3	Demographics of divorce	http://Missourifamilies.org/features/divorcearticles/feature17.htm	2,963
4	High protein diets	http://Missourifamilies.org/features/nutritionarticles/nut5.htm	2,530
5	Dietary supplements	http://Missourifamilies.org/features/nutritionarticles/nut9.htm	2,195
6	Facts about Quick diets	http://Missourifamilies.org/features/nutritionarticles/nut4.htm	1,448
7	Index for Missouri State Statutes on marriage and divorce law	http://Missourifamilies.org/learingopps/learndivorce/marriage&familylaw.htm	1,230
8	Report on the State of Missouri Families	http://Missourifamilies.org/report/index.htm	1,155
9	Violent videogames	http://Missourifamilies.org/features/adolescentarticles/adolesfeature1.htm	1,148

10	Breast cancer prevention	http://Missourifamilies.org/features/nutritionarticles/nut6.htm	999
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The number of accesses indicates the number of times this page was accessed online over the year. In the final months of this first year, the top page on the health risks of Metabolite (<http://Missourifamilies.org/features/nutritionarticles/nut10.htm>) was accessed once every 30 minutes and the page with information about the United States divorce rate (<http://Missourifamilies.org/quick/divorceqa/divorceqa3.htm>) was accessed once every hour.

Website Education Design Results

A key feature of this website is a design that starts with short answers to frequently asked questions (FAQs) and then links these answers to longer and more in-depth sources of information. In the long run, the design provides a means for people to seek increasing amounts of information on a topic of interest and ultimately engaging in opportunities to obtain guidance and feedback from online experts. At present, only the initial stages of this model are developed which provides at least some links from the FAQs to more in-depth articles.

By recording the progress of visitors through the website, we can collect information about the extent to which visitors followed the paths that we created. We are at the early stages of this analysis but some preliminary findings provide support for the design. One of the most active FAQs was about the divorce rate in the United States. This answer is linked to a longer article on the demographics of divorce and also to a page of articles on divorce topics in general. Our analysis indicates that about 20% of the visitors who accessed the FAQ on the divorce rate also followed the link to the longer article. Another 5% followed the path from the FAQ to the list of articles on divorce.

These data are not sufficient to make a convincing case for the education model that underlies this website, but these are significant findings that suggest the need to continue developing the design and to explore whether these paths are useful to learners. In addition to these methods of analysis, it will be important to obtain direct feedback from website visitors about the usefulness of the design.

Next Steps

The challenge in the further development of this work is to provide more interactive opportunities and to continue to integrate the content to more effectively provide learning paths for visitors to follow from one topic to more comprehensive information. The major characteristic of the Web that makes it a powerful teaching tool is the ability to provide interactive capabilities such that people can try out ideas and get feedback either from an automated system or through interactions with other web users. To advance this work, it will be important to continue the development of quizzes, surveys, discussion boards and other interactive tools. Additionally, information on the web can be linked from one topic to another topic in a fashion that helps people go from one issue to another issue in a way that fosters learning. It is not sufficient to have a catalogue of interesting facts online, it is important to provide guidance through this information that fosters learning. Unlike a book that allows a relatively few paths, the web allows for multiple paths that move from topic to related topic or from brief information to more in-depth understanding. The flexibility of the web allows educators to build complex and robust learning environments that serve a wide range of learners. MissouriFamilies can be an important model for other educators.

A complete report can be found here: <http://missourifamilies.org/about/firstreport/index.htm>